

CITY OF ANN ARBOR

# GEDDES DAM GATE RECOATING AND REPAIRS

JANUARY 2019

ITB#: 4564

Stantec Project Number: 2075148300

BID SET



PROJECT LOCATION MAP  
NOT TO SCALE

DRAWING INDEX:

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G-002	02	GENERAL NOTES AND SITE DETAILS
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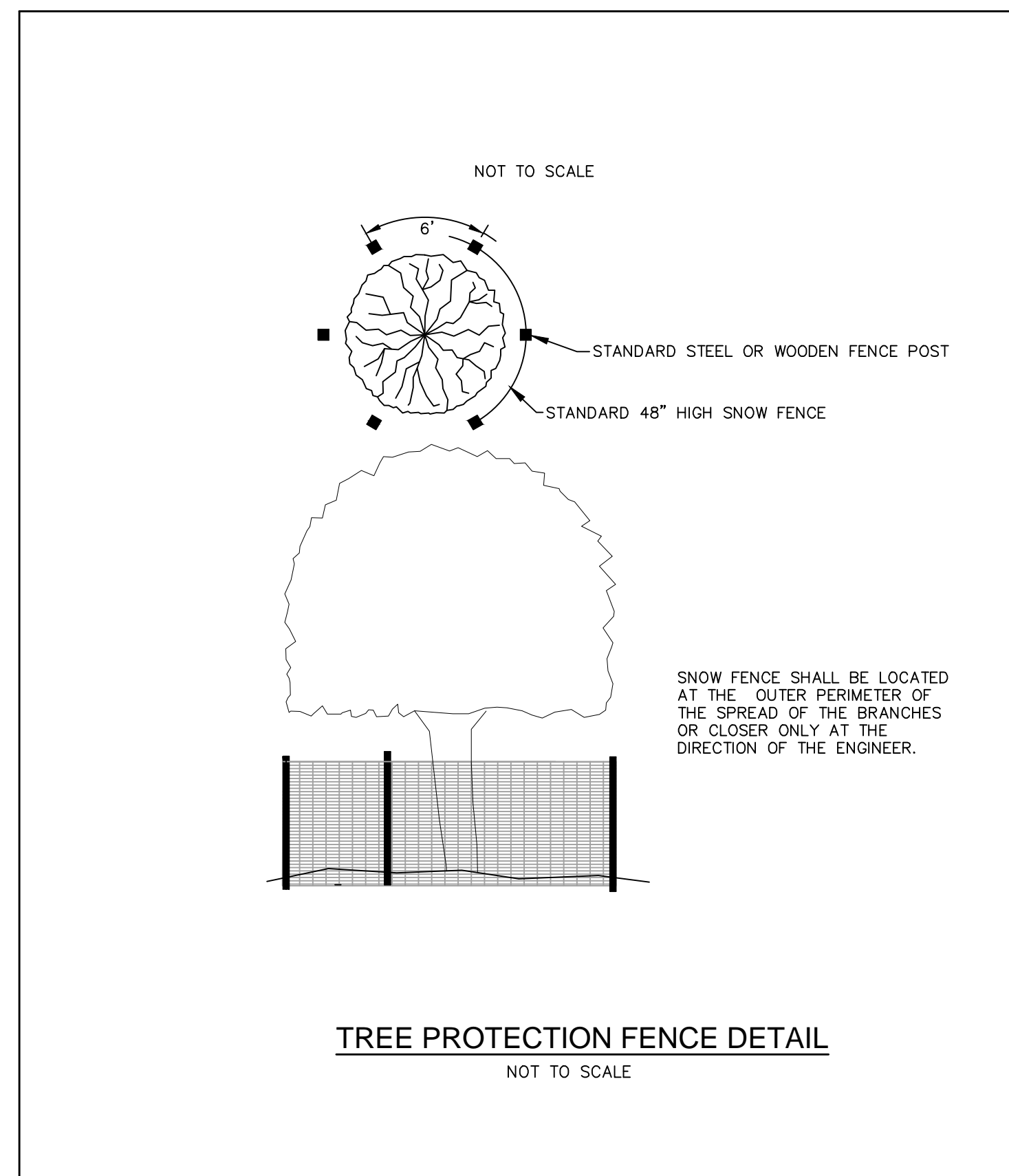
**Notes**

**PAINTING NOTES**

- ITEMS TO BE PAINTED ARE DESIGNATED IN THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL COMPONENTS OF THE DESIGNATED ITEMS.
- WHERE POSSIBLE ITEMS SHALL BE SHOP PAINTED OFF SITE. OTHER ITEMS SHALL BE PAINTED IN PLACE WITH CONTAINMENT.
- PROTECT ALL CONCRETE FROM BLAST MEDIA AND BLASTING PROCESS.
- PROTECT ALL MECHANICAL, ELECTRICAL AND OTHER COMPONENTS NOT INTENDED TO BE BLASTED. PROTECT GREASED LIFT CHAINS.
- TESTING CONFIRMS THE PRESENCE OF LEAD PAINT ON THIS PROJECT. SEE APPENDIX OF THE SPECIFICATIONS FOR TEST RESULTS. THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF SECTION 01370 (LEAD BASED PAINT REMEDIATION) IN THE SPECIFICATIONS.
- STAINLESS STEEL SIDE SEALS SHALL NOT BE PAINTED.
- REMOVE ANY MANUFACTURER NAMEPLATES, TAGS, ETC PRIOR TO BLASTING AND PAINTING. REATTACH WITH STAINLESS STEEL RIVETS.
- BLAST MEDIA SHALL BE FULLY CONTAINED AND IS NOT PERMITTED TO WASH DOWNSTREAM.
- UNLESS NOTED OTHERWISE, ALL METAL TO BE COATED SHALL BE PREPARED SSPC-SP 10 NEAR WHITE METAL PRIOR TO PLACING COATINGS.

**GENERAL NOTES**

- PROVIDE TEMPORARY BARRIERS AS NEEDED FOR PROTECTION OF THE PUBLIC.
- PROVIDE SIGNAGE FOR "CONSTRUCTION AHEAD", "WALKWAY CLOSED" AND "CAUTION", AND OTHER SIGNAGE AS NECESSARY. IN GENERAL, IT IS ANTICIPATED THAT PUBLIC WALKWAY CLOSURES WILL NOT BE NECESSARY, AND IF NECESSARY ONLY OCCASIONALLY AND FOR SHORT DURATIONS (LESS THAN 1 DAY).
- NO DEBRIS, DEMOLISHED ITEMS, CONSTRUCTION MATERIALS, ETC. SHALL BE PERMITTED TO ENTER THE RIVER. ANY ITEMS FALLING INTO THE RIVER SHALL BE IMMEDIATELY REMOVED.
- CIGARETTE BUTTS SHALL NOT BE DISCARDED INTO THE RIVER OR ON THE GROUND.
- ALL OSHAMIOSHA REQUIREMENTS SHALL BE ADHERED TO. SAFETY DEVICES SHALL BE WORN AT ALL TIMES WHERE NEEDED FOR FALL PROTECTION AND/OR WATER SAFETY.
- PROTECT EXISTING PAVEMENTS AND WALKS FROM DAMAGE.
- RESTORE ALL DISTURBED AREAS AS PER THE SPECIFICATIONS.
- PROTECT EXISTING TREES AS INDICATED IN THE DRAWINGS.
- TEMPORARY CLOSURES OF OLD DIXBORO ROAD SHALL NOT BE PERMITTED.



**TREE PROTECTION FENCE DETAIL**  
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File Name: 148300_G-002.DWG	BWAFDA	PJM	PJM	12.10.11
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**GEDDES DAM**  
**GATE RECOATING AND REPAIRS**  
ANN ARBOR, MI

Title  
**GENERAL NOTES AND SITE DETAILS**

Project No. 2075148300	Scale NOT TO SCALE
Revision Sheet 0 2 of 9	Drawing No. <b>G-002</b>



**NOTE:**  
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS DIG PRIOR TO CONSTRUCTION.

Consultant

SHEET NOTES:

- ① NEW WORK AREA.
- ② PROTECT EXISTING TREE.
- ③ CONTRACTOR MAY INSTALL CONSTRUCTION FENCE AS REQUIRED.
- ④ CONTRACTOR MAY TAKE ONLY ONE BAY OUT OF SERVICE AT A TIME FOR THE DURATION OF THE PROJECT.
- ⑤ BRIDGE SHALL NOT BE USED FOR STAGING OR AS A LIFT PLATFORM.

8	BID SET	FJM	FJM	2019.01.29
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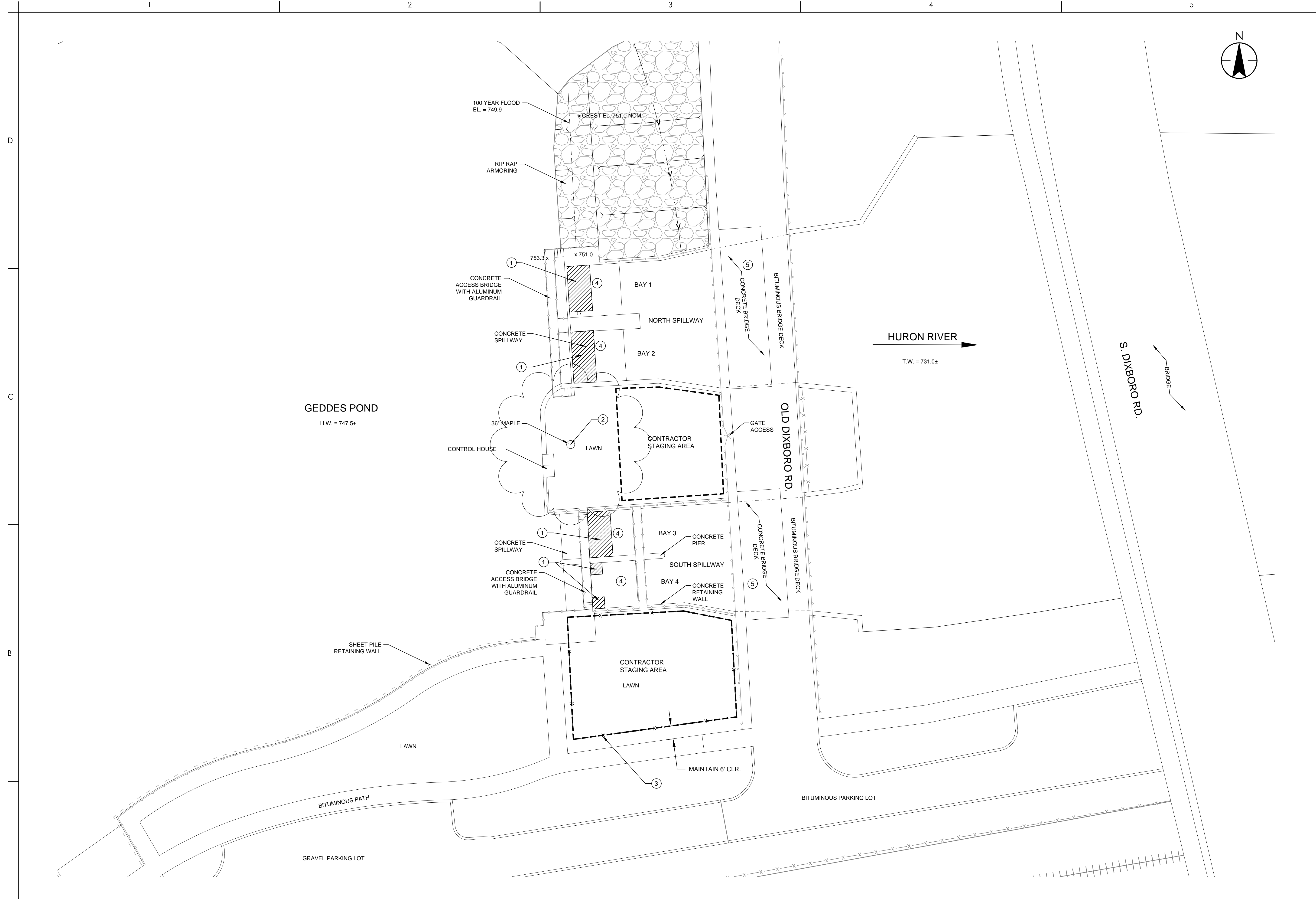
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GATE RECOATING AND REPAIRS  
ANN ARBOR, MI

Title  
GENERAL SITE PLAN

Project No. 2075148300  
Revision Sheet 0 3 of 9  
Scale 0 20' 40'  
Drawing No. C-101

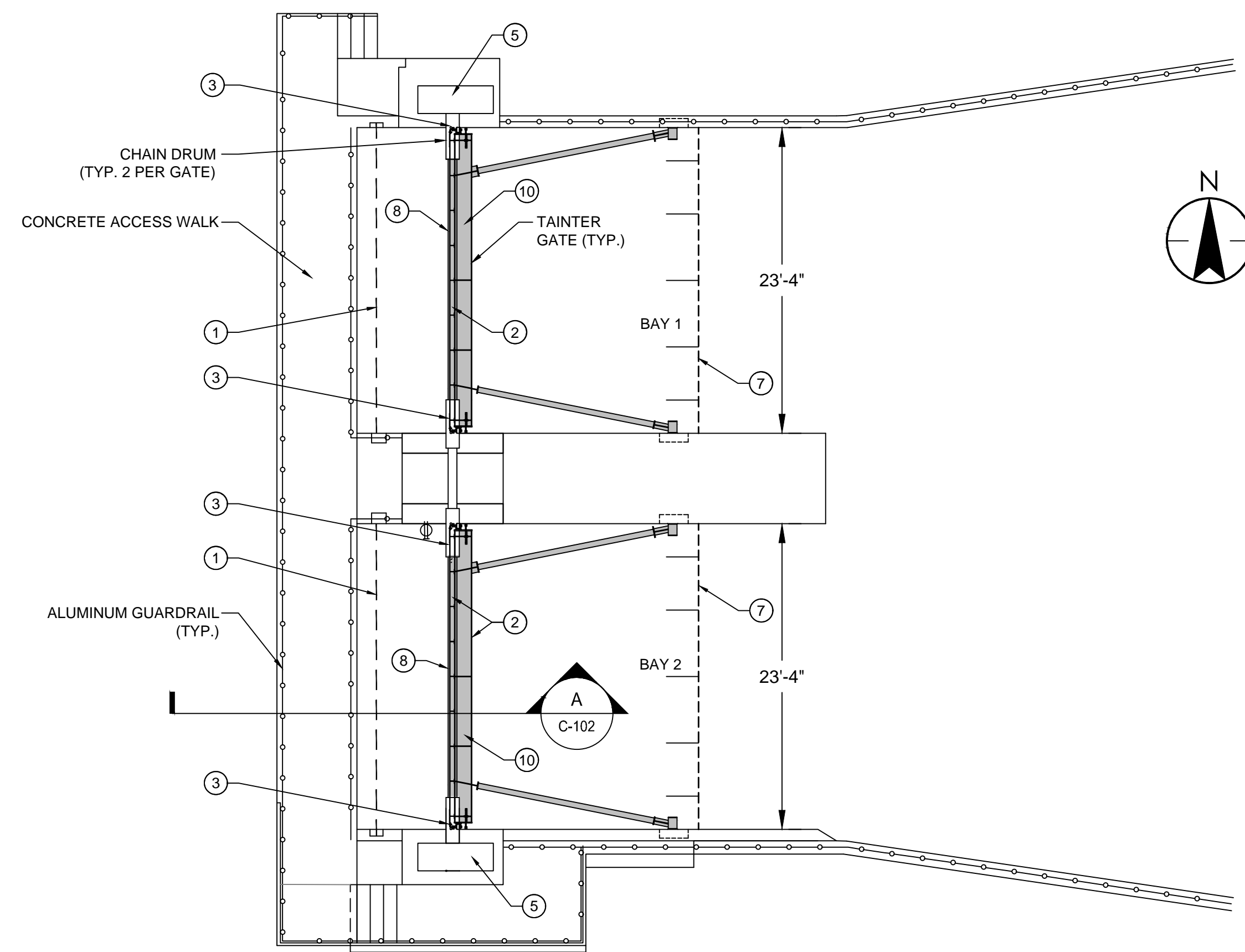


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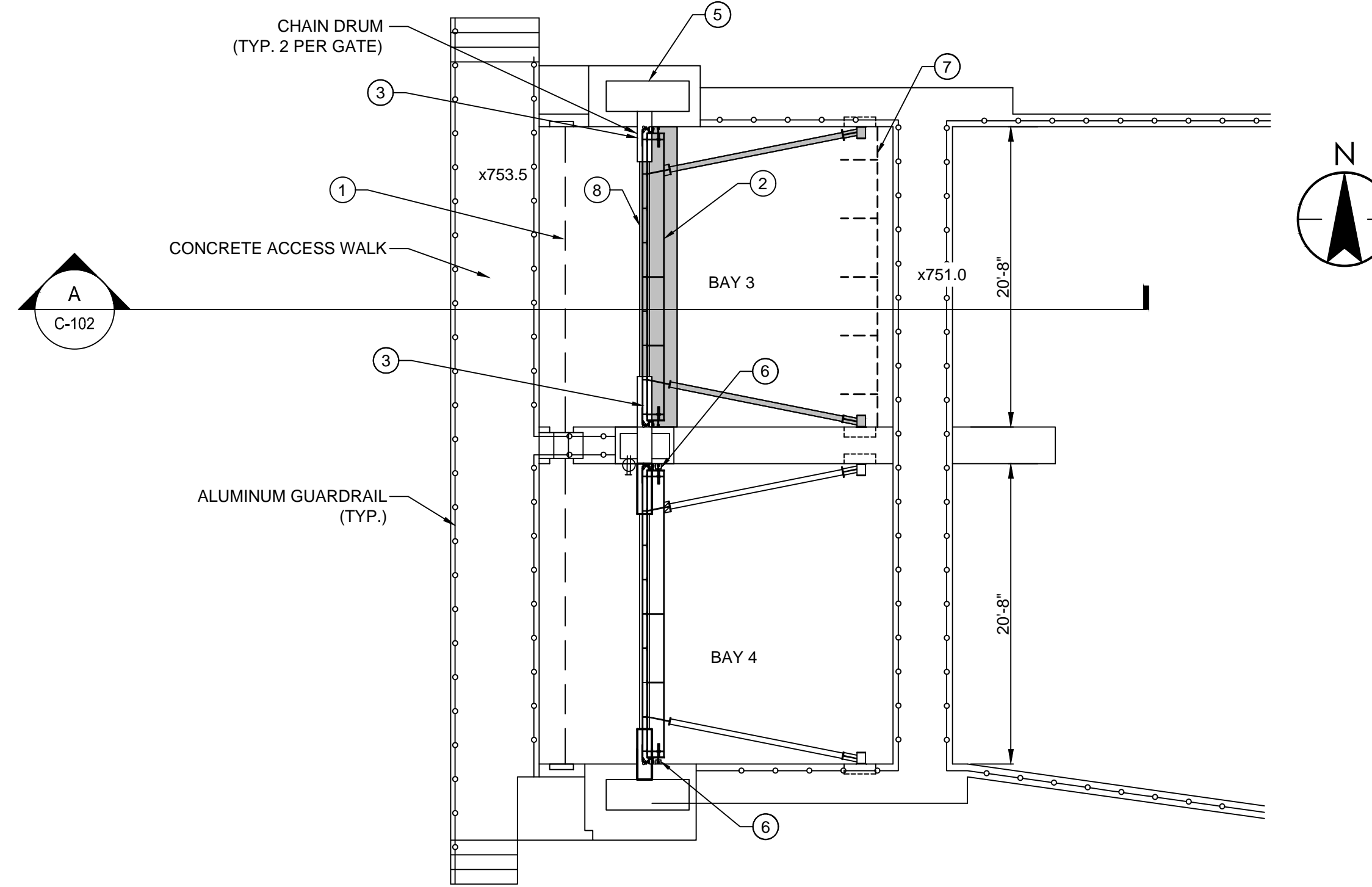
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**SHEET NOTES:**

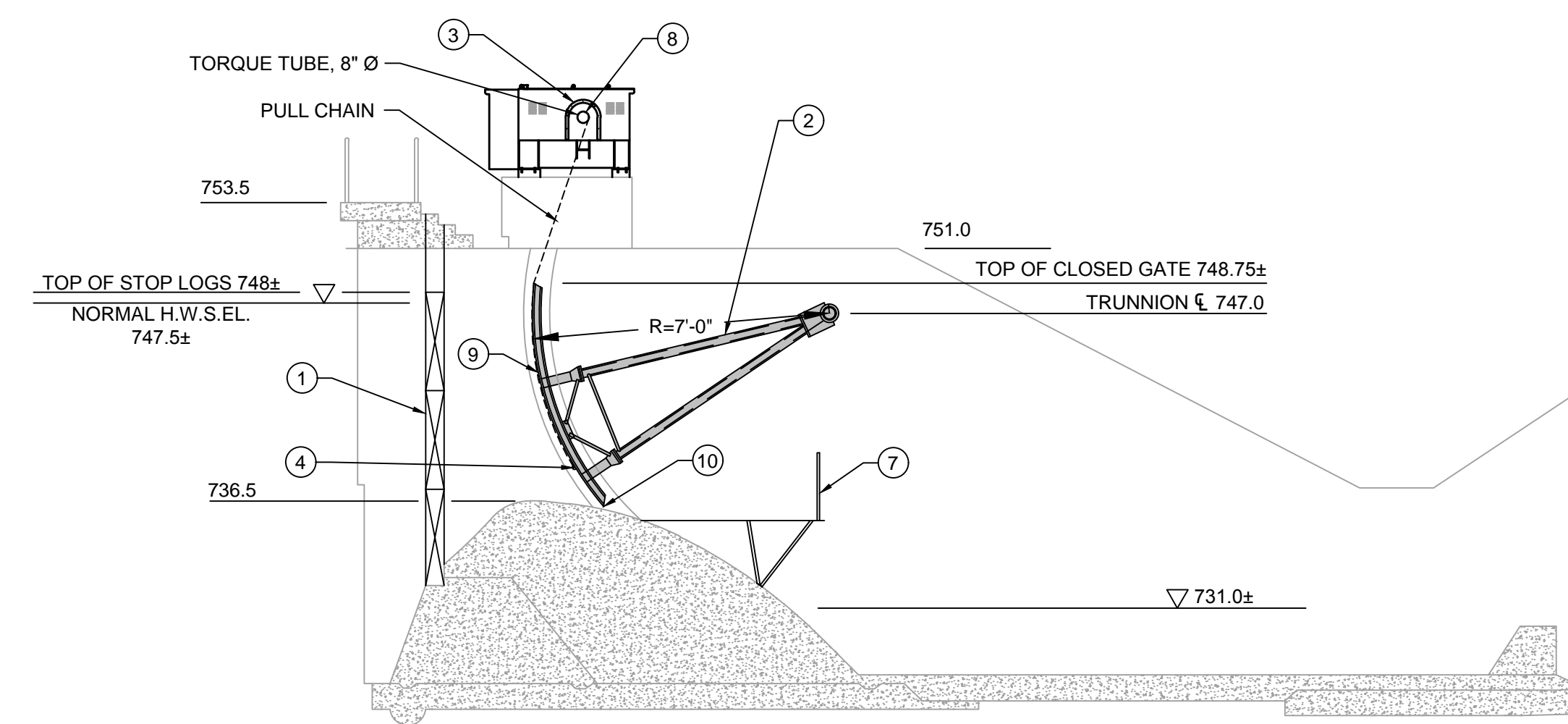
- 1) INSTALL TEMPORARY STOPLOGS. REMOVE STOPLOGS UPON COMPLETION OF EACH GATE AND RETURN TO OWNER'S STORAGE LOCATION AT THE END OF THE PROJECT (STOPLOGS ARE STORED AT BARTON PUMP STATION). CONTRACTOR MAY TAKE ONLY ONE BAY OUT OF SERVICE AT A TIME.
- 2) RE-COAT GATE (BAYS 1, 2 AND 3).
- 3) REMOVE EXISTING CHAIN GUARD AND RE-INSTALL AFTER PAINTING TORQUE TUBE.
- 4) UNSHACKLE CHAIN FROM GATE FOR COATING. RE-ATTACH TO GATE AFTER COMPLETION.
- 5) AFTER RE-ATTACHING CHAINS, COORDINATE WITH CITY FOR CALIBRATION OF POSITION INDICATORS ON HOISTS.
- 6) REPLACE EMBEDDED GATE STOPS FOR BAY NO. 4. SEE DETAIL 4 ON DRAWING S-502. COAT IN PLACE. SSPC-SP-10 NEAR WHITE.
- 7) IN CLOSED BAY, INSTALL TEMPORARY SERVICE PLATFORM(S) AND FALL PROTECTION GUARD(S) AS REQUIRED. INCLUDE BARRIER(S) TO PREVENT DEBRIS FROM ENTERING RIVER.
- 8) RE-COAT TORQUE TUBE (BAYS 1, 2 AND 3).
- 9) REPLACE SIDE-SEALS (GATES 1, 2 & 3). SEE DETAIL 2 ON DRAWING S-502.
- 10) REPLACE BOTTOM SEALS (GATES 1, 2 & 3). SEE DETAIL 3 ON DRAWING S-502.



**NORTH SPILLWAY**  
SCALE: 1/8" = 1'-0"



**SOUTH SPILLWAY**  
SCALE: 1/8" = 1'-0"



**SECTION A**  
SCALE: 1/8" = 1'-0"

**NOTE:**  
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NEW WORK PLAN

Project No. 2075148300	Scale AS NOTED
Revision Sheet 0 4 of 9	Drawing No. <b>C-102</b>

### 1 - GENERAL NOTES

- A. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH OTHER PROJECT DRAWINGS AND SPECIFICATIONS.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC., IN FIELD AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION OR SHOP DRAWINGS.
- C. THE DRAWINGS ARE INTENDED TO REQUIRE AND TO INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT PROPER FOR THE WORK.
- D. ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND REQUIREMENTS.
- E. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND SAFETY PROCEDURES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK.
- F. OBSERVE ALL OSHA / MIOSHA AND OTHER APPLICABLE SAFETY REQUIREMENTS INCLUDING THE USE OF SAFETY GLASSES, HARD HATS, AND PROTECTION OF AREA WHEN WORKING OVERHEAD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CONSTRUCTION SAFETY AT ALL TIMES.
- G. COORDINATE WORK OF ALL DISCIPLINES (STRUCT., ELECT., ETC.) WITH EXISTING CONDITIONS, SPECIAL REQUIREMENTS, CONSTRUCTION SCHEDULE AND OTHER CONTRACTORS PERFORMING WORK AT THE SITE.
- H. THE CONTRACTOR SHALL DESIGN AND PROVIDE ANY TEMPORARY SHORING, BRACING, ETC., AS NEEDED FOR THE WORK SO AS NOT TO ENDANGER THE STRUCTURAL INTEGRITY OF ANY EXISTING FEATURE.
- I. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AS A RESULT OF THIS WORK. DAMAGED ITEMS SHALL BE REPLACED IN KIND AND AT NO ADDITIONAL COST TO THE OWNER.
- J. SEE SPECIFICATIONS FOR FULL SCOPE OF REQUIREMENTS APPLICABLE TO THIS PROJECT.
- K. SHOP DRAWINGS: REPRODUCTION OF DESIGN DRAWINGS SHALL NOT BE PERMITTED FOR SHOP DRAWING SUBMISSIONS. THE GENERAL CONTRACTOR SHALL REVIEW AND PROVIDE REVIEW STAMP ON SHOP DRAWING SUBMISSIONS PRIOR TO SUBMITTAL TO ENGINEER INDICATING UNDERSTANDING AND ACCEPTANCE OF SUBMITTAL AND CONFIRMING CONFORMANCE TO PROJECT PLANS/SPECIFICATIONS.
- L. PRIOR TO PERFORMING ANY METAL REPAIRS, ABRASIVE BLAST TAINTER GATE AND COORDINATE GATE INSPECTION WITH ENGINEER. PARTICULAR REPAIRS SHALL BE FIELD DETERMINED BY CONSULTATION BETWEEN THE OWNER, CONTRACTOR AND ENGINEER.
- M. AFTER STRUCTURAL REPAIRS ARE COMPLETE AND BEFORE INSTALLING SEALS, RE-BLAST AND COAT GATE AND ALL METALS PER SPECIFICATION 09900-PAINTING.

### 2 - STRUCTURAL STEEL

- A. STRUCTURAL STEEL WORK INCLUDES ALL STRUCTURAL STEEL TO BE FURNISHED AND ERECTED, BEAMS, COLUMNS, CHANNELS, ANGLES, JOISTS, LINTELS, BEARING PLATES, ETC., AS INDICATED ON THE DRAWINGS.
- B. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
  - 1. AISC STEEL CONSTRUCTION MANUAL, ASD, 8TH EDITION
  - 2. AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE STEEL", LATEST EDITION.
  - 3. CURRENT OSHA ERECTION AND FABRICATION REQUIREMENTS.
- C. MATERIALS:
  - 1. BEAMS, GIRDERS, SKIN PLATE AND COLUMNS: ASTM A992
  - 2. ANGLES, BARS AND PLATES: ASTM A36
  - 3. TUBE STEEL: ASTM A500, GRADE B Fy=42 KSI
  - 4. PIPE: CONFORMING TO ASTM A53, GRADE B, U.N.O.
  - 5. HIGH STRENGTH BOLTS: ASTM A 325.
  - 6. CAST STEEL: ASTM A27.
  - 7. WELDS: E70XX ELECTRODES.
- D. ALL STRUCTURAL STEEL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE HIGH-STRENGTH BOLTED UNLESS SHOWN OTHERWISE.
- E. ALL BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION UNLESS NOTED OTHERWISE. SLIP CRITICAL BOLTS SHALL BE USED AT ALL MOMENT CONNECTIONS.
- F. PROVIDE S.S. ANCHORS AND OTHER DEVICES TO BE BUILT INTO CONCRETE WORK.
- G. STEEL SHALL RECEIVE PAINT SYSTEM AS PER PAINT SPECIFICATIONS (SECTION 09900).
- H. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INCLUDING COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS, PROCEDURES AND DIAGRAMS.
- I. PIPE SCHEDULE DIMENSIONS AS FOLLOWS:
 

SCH	NOM. SIZE	O.D.	WALL
80	2 1/2	2.875	0.276
80	5	5.563	0.375
160	8	8.625	0.906
- J. 3/16" CAP PLATE REQUIRED ON ALL TUBES AND PIPES. WELD WATER TIGHT.

### 3 - FABRICATION

- A. ALL WELDS TO BE CONTINUOUS FILLET. RIB TO SKIN PLATE WELDS TO BE 3/16", OTHER WELDS TO BE 1/4" UNLESS NOTED.
- B. ALL CORNERS AND EDGES IN CONTRACT WITH RUBBER SEALS TO BE ROUNDED. ALL CUT OR DRILLED EDGES SHALL BE SMOOTHENED AND DEBURRED.
- C. ENDS OF ALL PIPE MEMBERS TO BE CLOSED AND WELDED WATERTIGHT.
- D. FOR TOLERANCES SEE SPECIFICATIONS.
- E. SEALS SHALL BE CONTINUOUS, WATERTIGHT AND SPLICES IF REQUIRED SHALL BE VULCANIZED.
- F. SKIN PLATE JOINTS TO BE WATERTIGHT, FULL PENETRATION BEVEL BUTT WELDS WELDED FROM BOTH SIDES. WELDS TO BE GROUND FLUSH WHERE IN CONTACT WITH SEALS.
- G. ALL SURFACE FINISHES SPECIFIED IN μ-INCHES (MICRONS) TEXTURE.
- H. SURFACE FINISH ON BEARING PINS FOR RUNNING FIT SUBJECT TO RECOMMENDATIONS OF BEARING MANUFACTURER. FABRICATOR SHALL COORDINATE WITH BEARING MANUFACTURER.
- I. UNLESS NOTED OTHERWISE, FAYING SURFACES SHALL BE FINISHED TO 125μ-INCHES.
- J. APPROXIMATE ANGLES AND DIMENSIONS SHOWN ON DRAWINGS. REPLACEMENT COMPONENTS SHALL BE FABRICATED TO MATCH EXISTING, BASED ON THE CONTRACTORS FIELD MEASUREMENTS.



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#### Notes

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GEDDES DAM  
 GATE RECOATING AND REPAIRS  
 ANN ARBOR, MI

#### Title

#### NOTES

Project No.	2075148300	Scale	N/A
Revision	Sheet	Drawing No.	S-001
0	5 of 9		

- SHEET NOTES:**
- 1 REPLACE GATE ARMS. NUMBER AND LOCATION TO BE FIELD-DETERMINED
  - 2 REPLACE CROSS SUPPORTS AND CONNECTOR PLATES. CAP ENDS OF ALL PIPES. NUMBER AND LOCATION TO BE FIELD-DETERMINED
  - 3 REMOVE OLD AND INSTALL NEW BATTEN BAR AND BOTTOM SEAL
  - 4 REMOVE OLD AND INSTALL NEW BATTEN BAR AND SIDE SEALS
  - 5 SEE DETAIL 1 ON S-501 FOR CHAIN COUPLING REQUIREMENTS
  - 6 REPLACE 3/4" Ø BOLTS AND LOCK-WASHERS. NUMBER AND LOCATION TO BE FIELD-DETERMINED
  - 7 REPLACE HUB AND TRUNNION PIN
  - 8 REPLACE UPRIGHT SUPPORT

8	BID SET	FJM	FJM	2019.01.29
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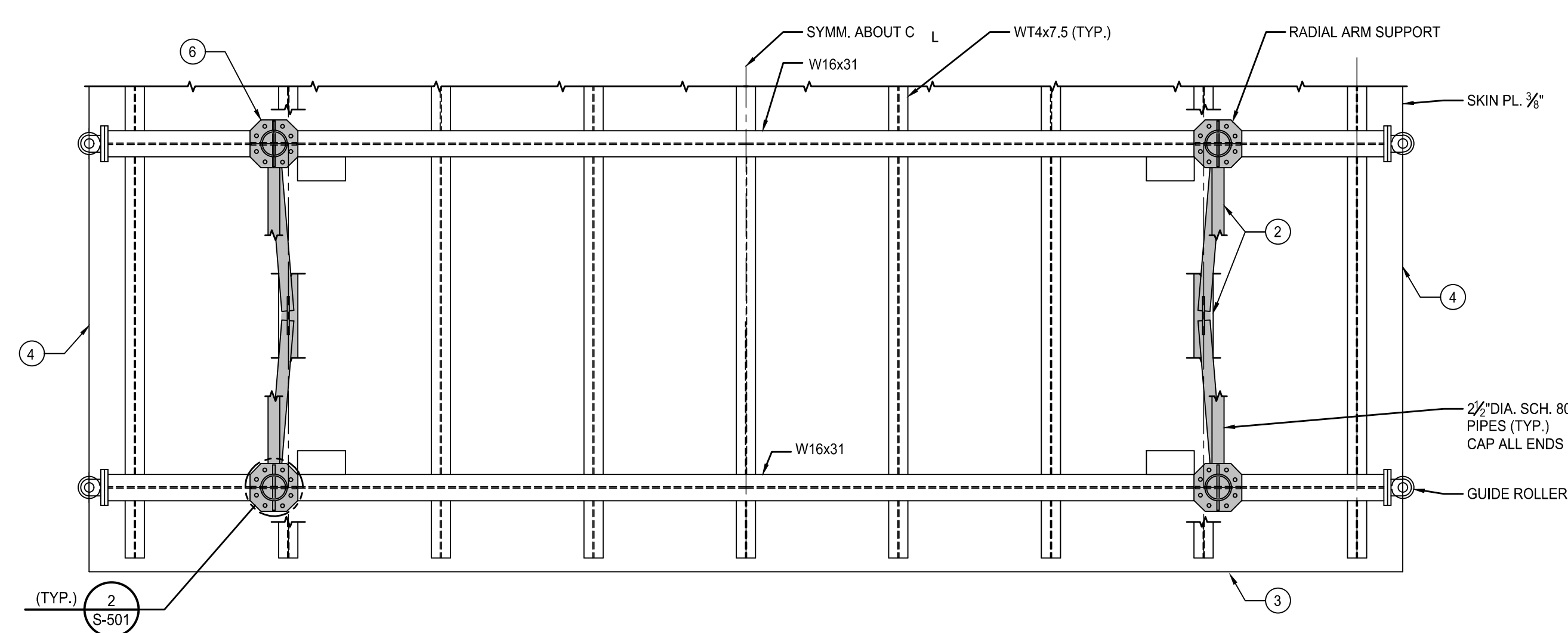
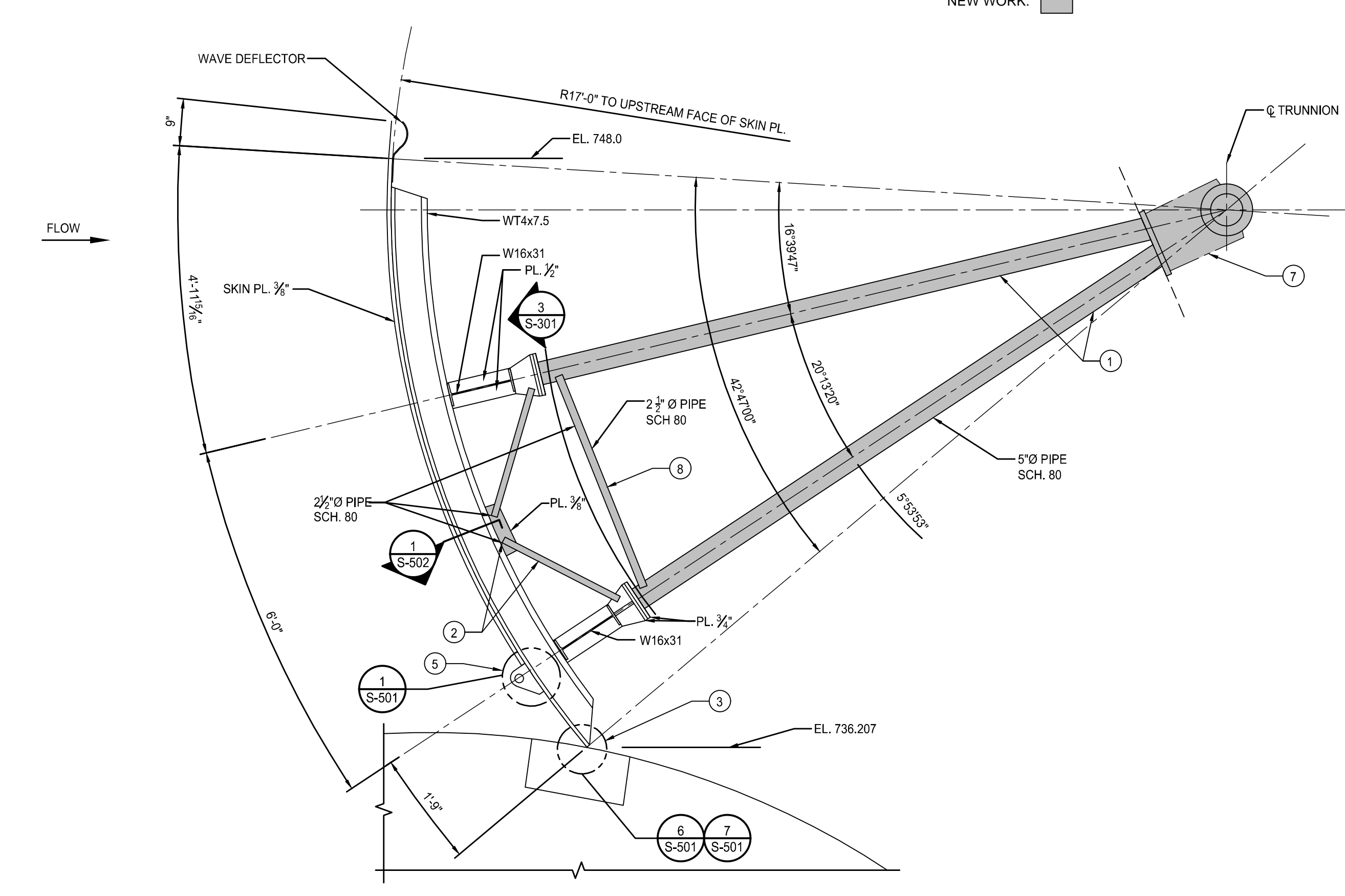
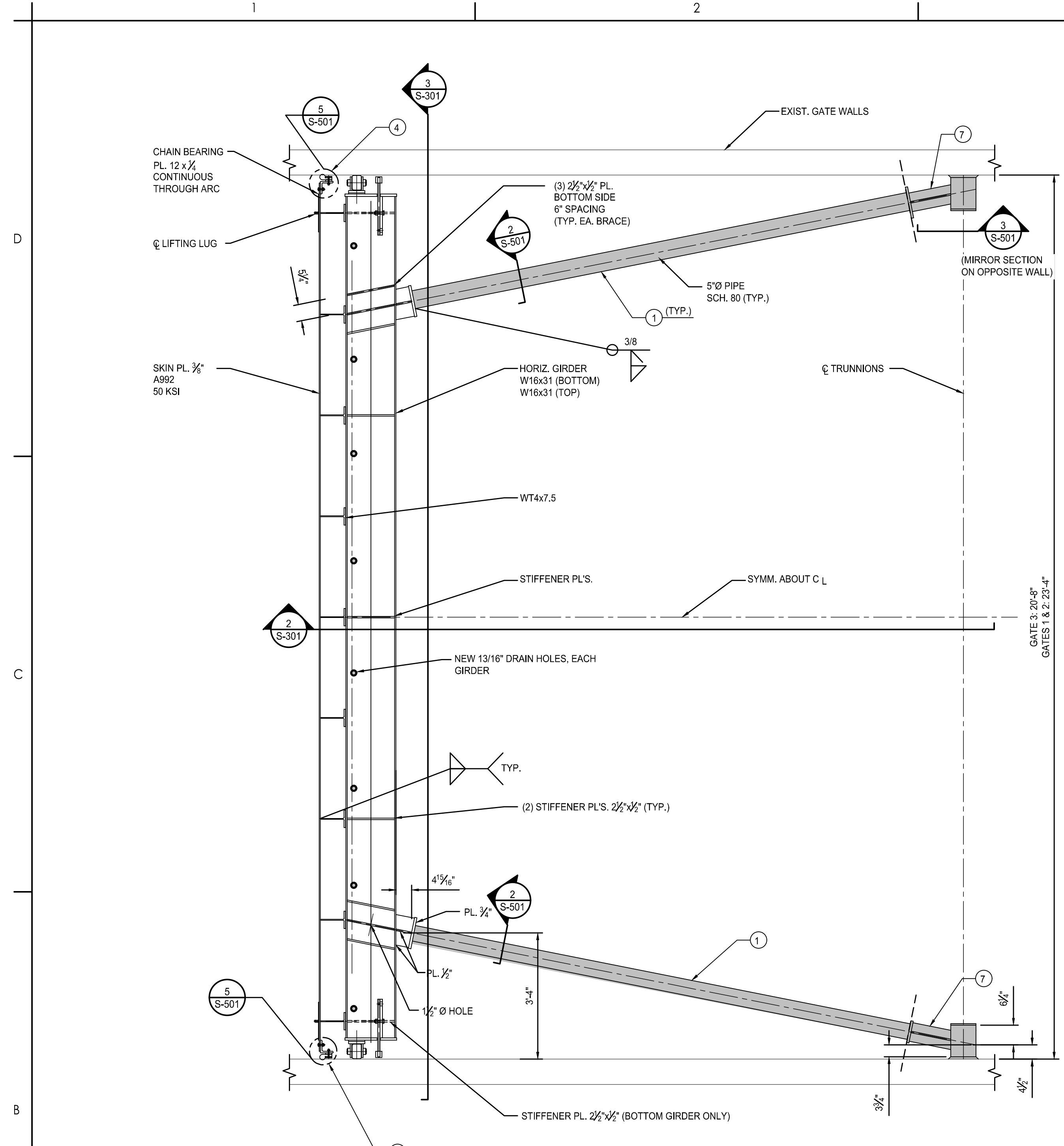
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ANN ARBOR, MI

Title

TANTER GATE REPAIRS (GATE 1, 2 & 3)  
PLAN AND SECTIONS

Project No. 2075148300  
Revision Sheet 0 of 9

Scale AS NOTED  
Drawing No. S-301



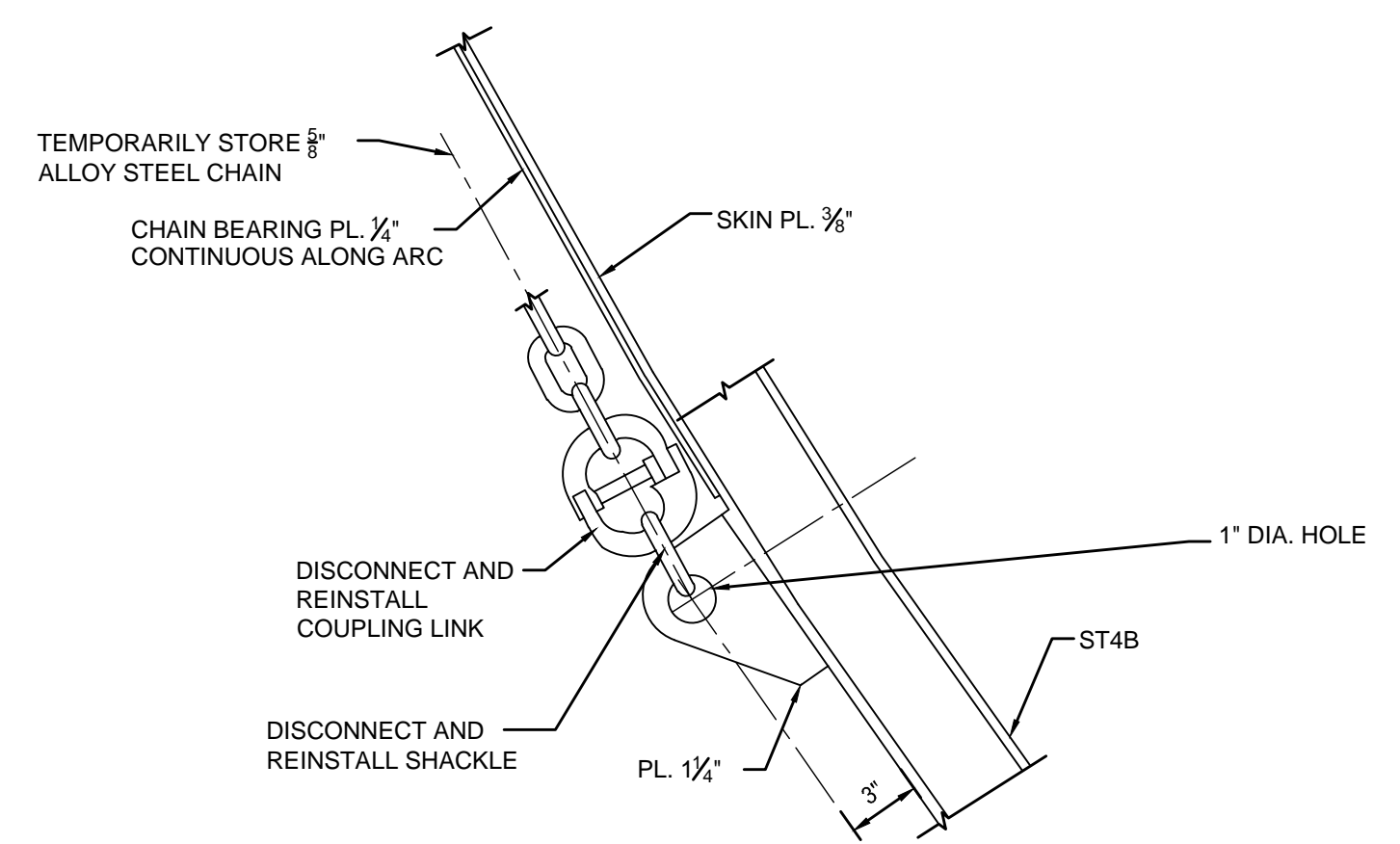


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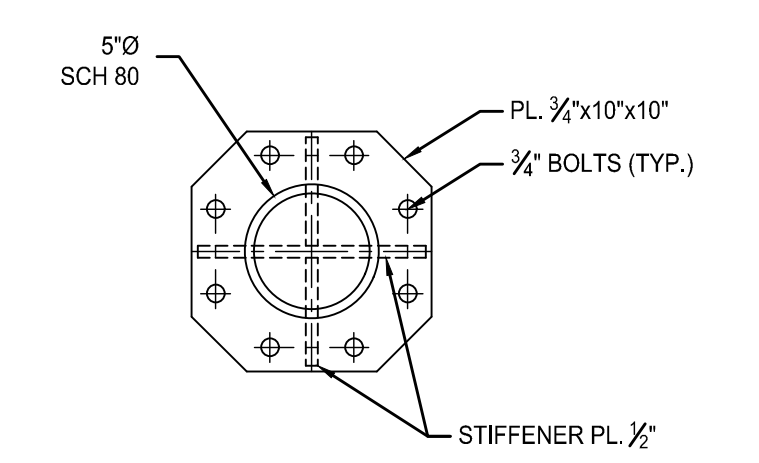
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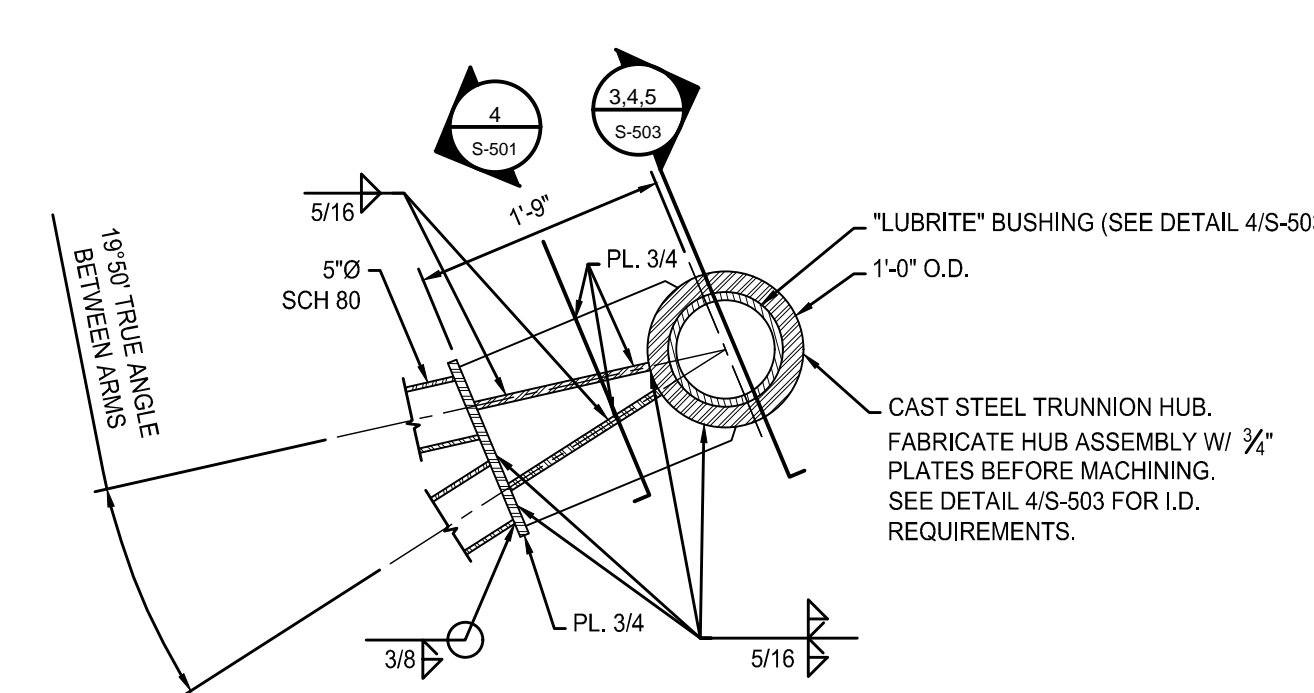
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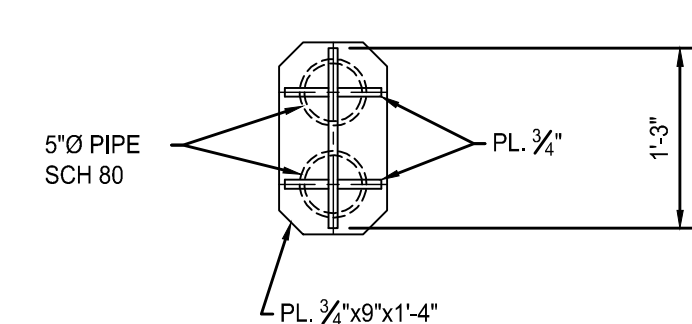
1 DETAIL - CHAIN PULL CONNECTION  
S-501 1 1/2"=1'-0"



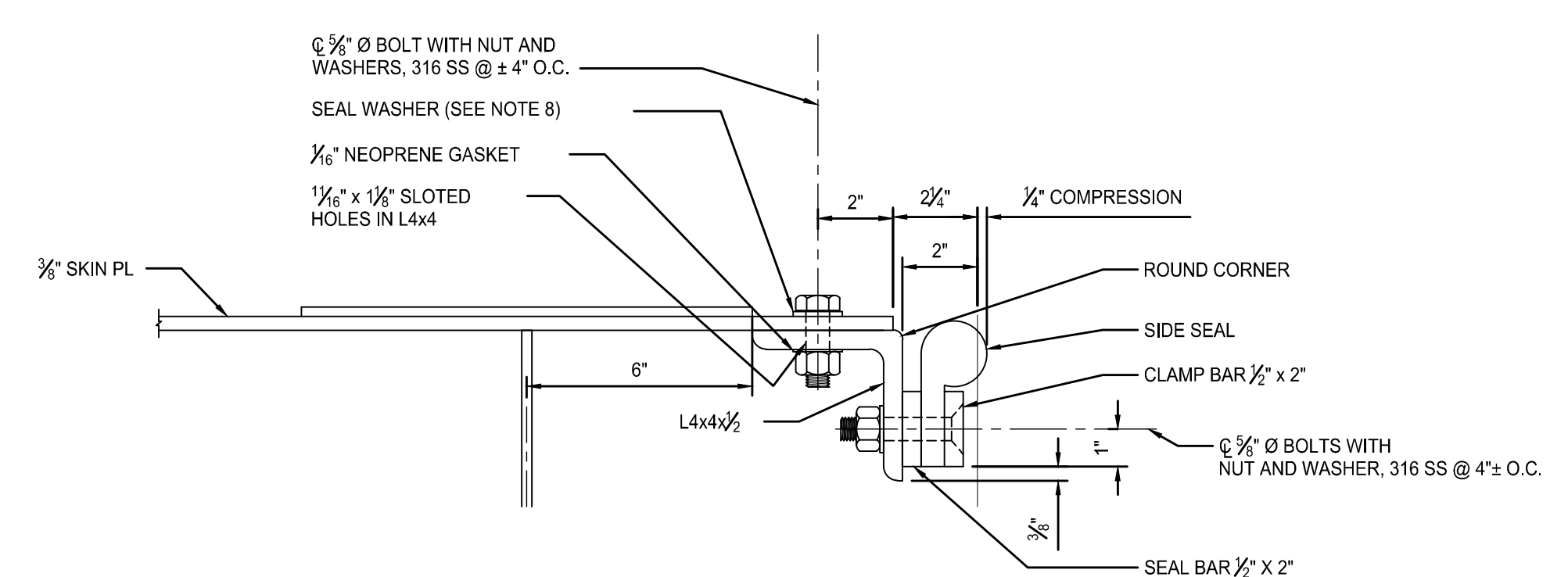
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S-501 1 1/2"=1'-0"



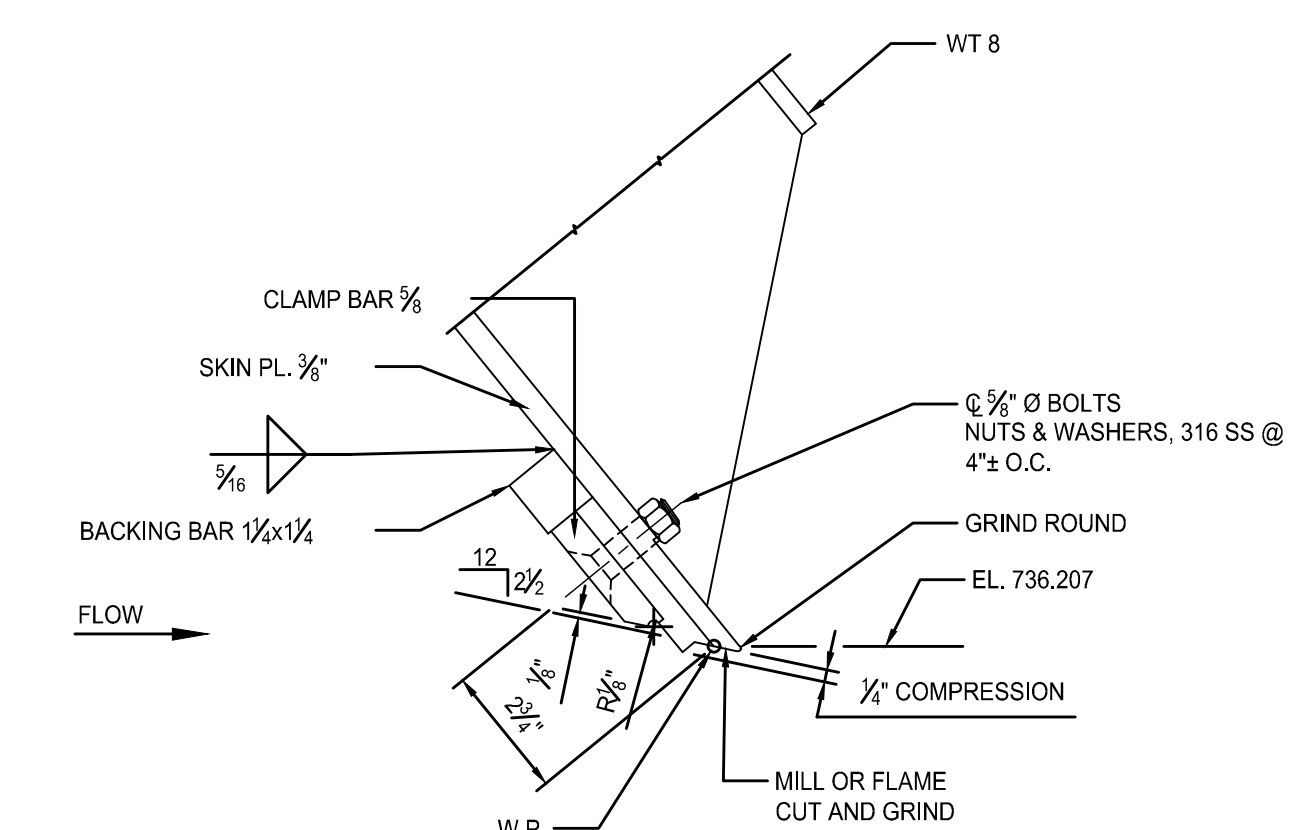
3 SECTION - HUB ASSEMBLY  
S-501 3/4"=1'-0"



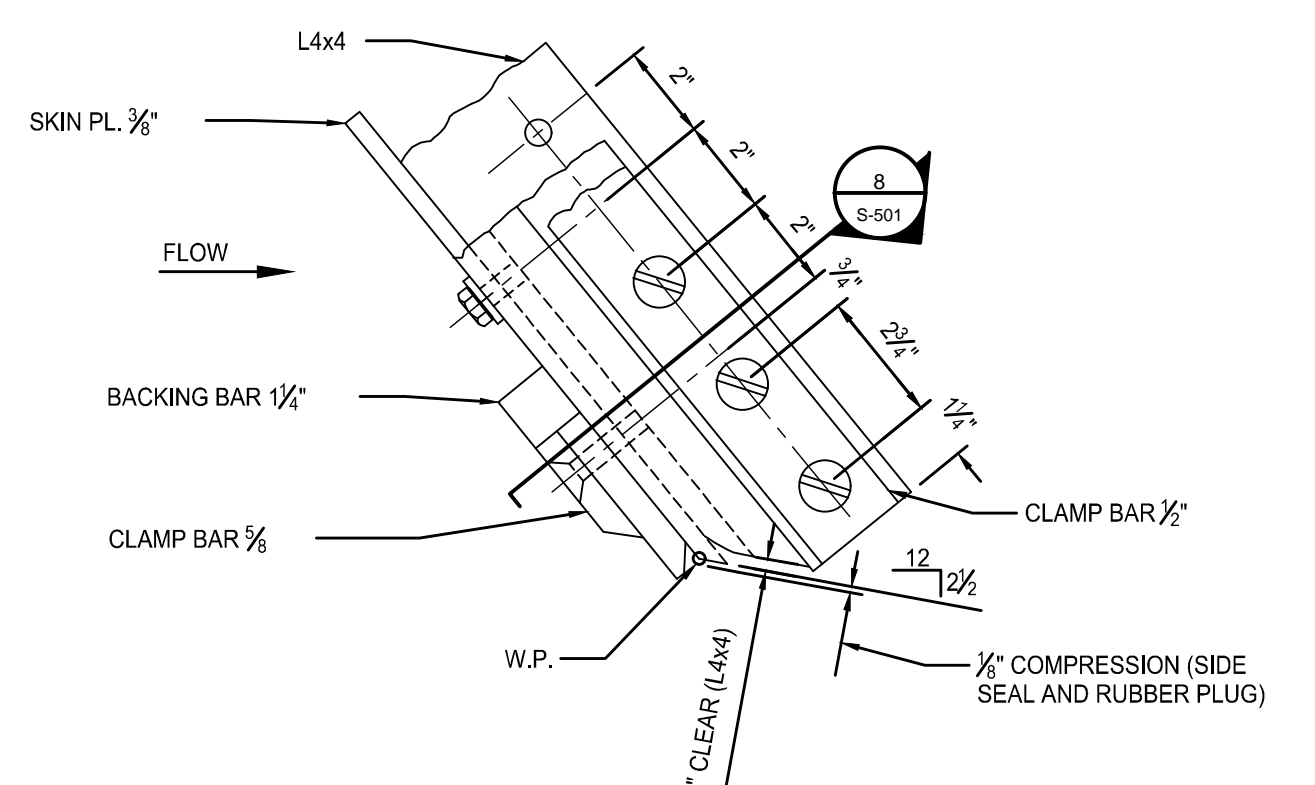
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S-501 3/4"=1'-0"



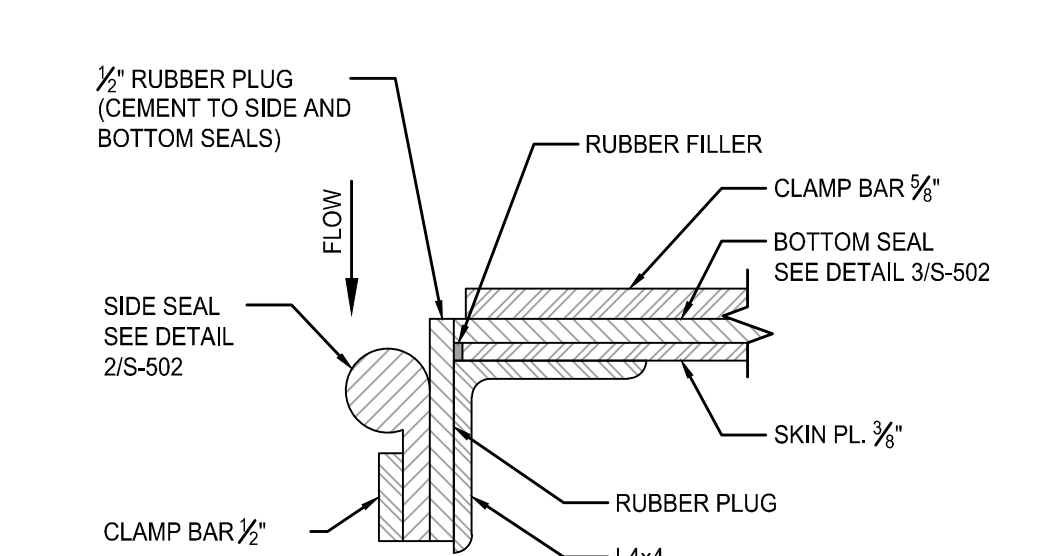
5 DETAIL  
S-501 3"=1'-0"



6 DETAIL  
S-501 3"=1'-0"



7 BOTTOM SEAL CONER  
S-501 3"=1'-0"



8 SECTION  
S-501 3"=1'-0"

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GATE RECOATING AND REPAIRS  
ANN ARBOR, MI

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SECTIONS AND DETAILS I

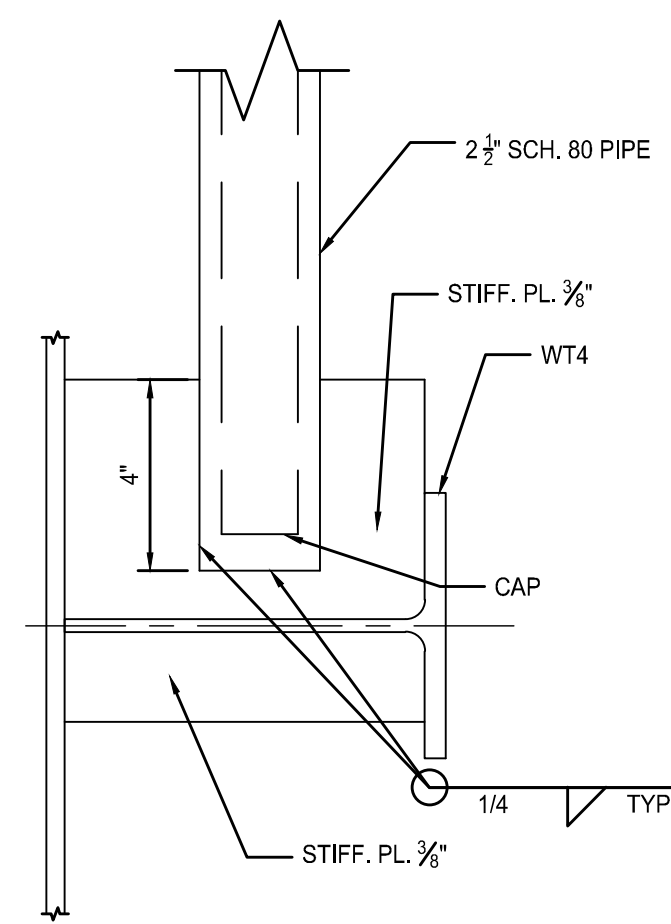
Project No. 2075148300	Scale AS NOTED
Revision Sheet 0 7 of 9	Drawing No. S-501

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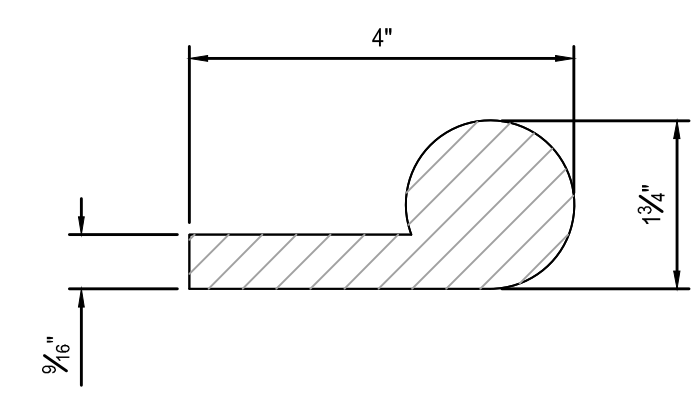
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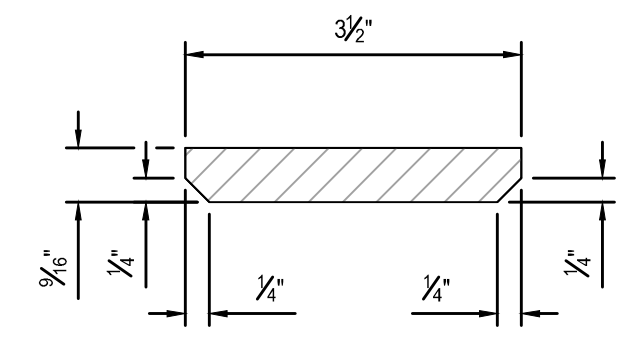
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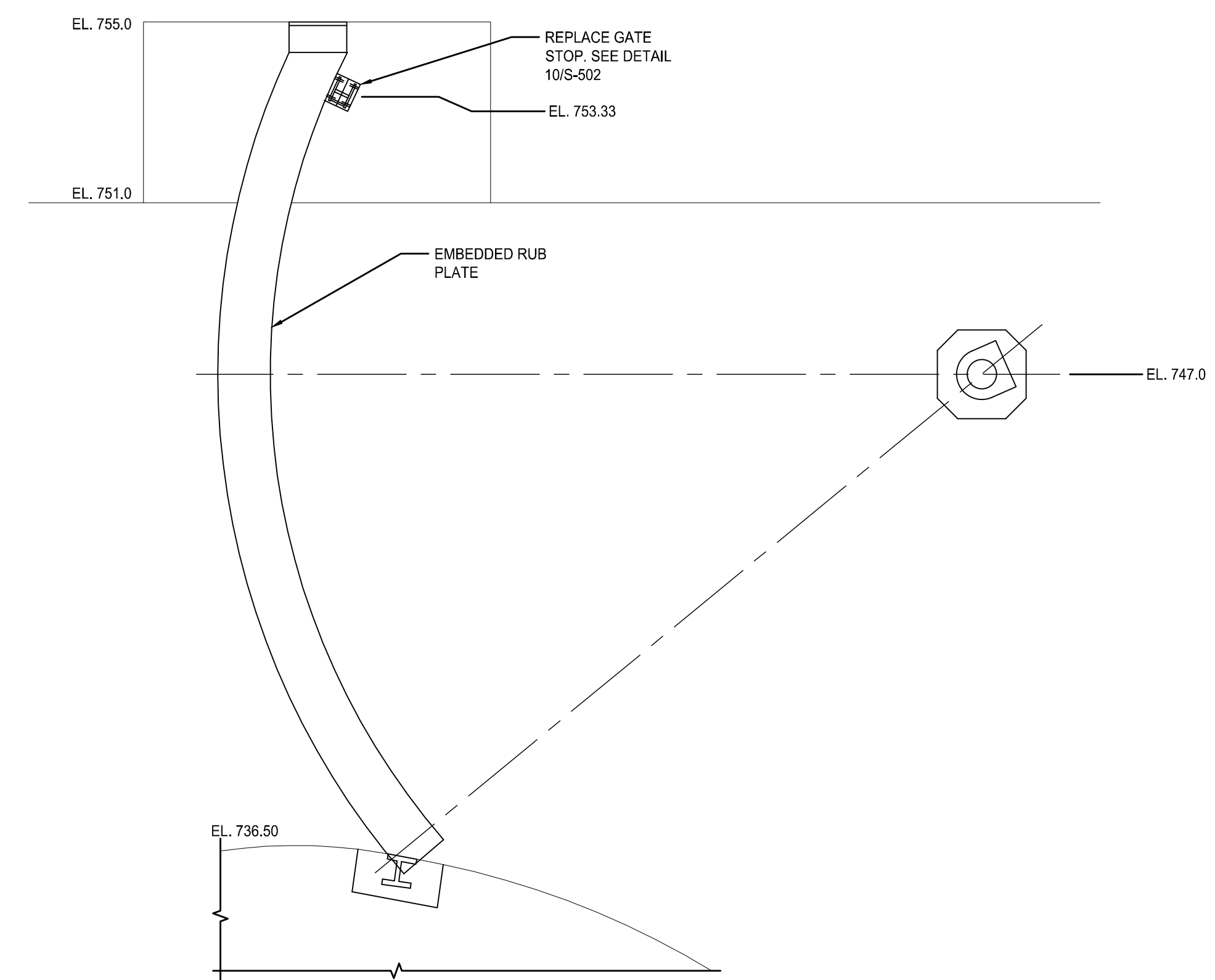
**1 SECTION**  
 S-502 3"=1'-0"



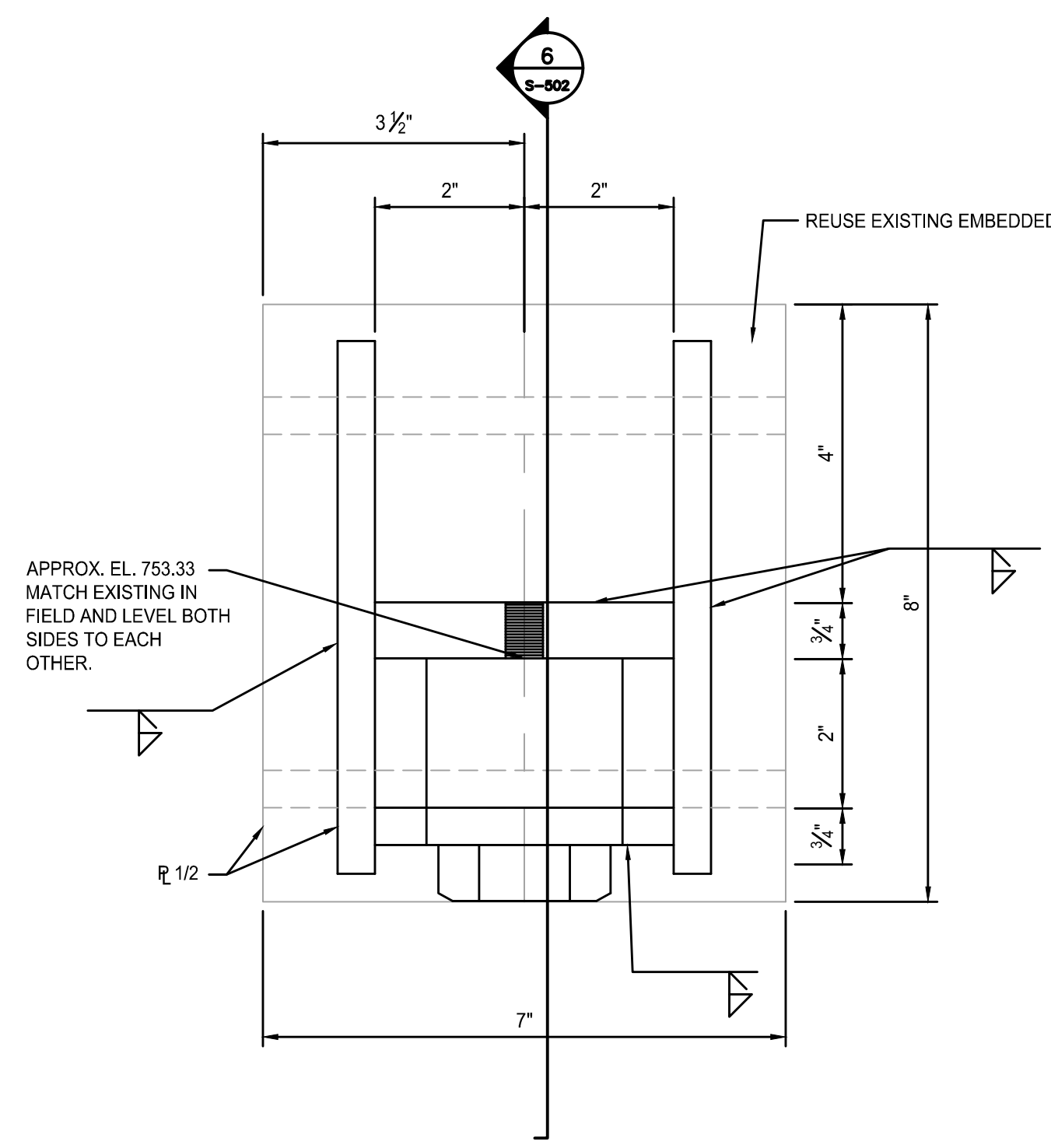
**2 SIDE SEAL**  
 S-502 6"=1'-0"



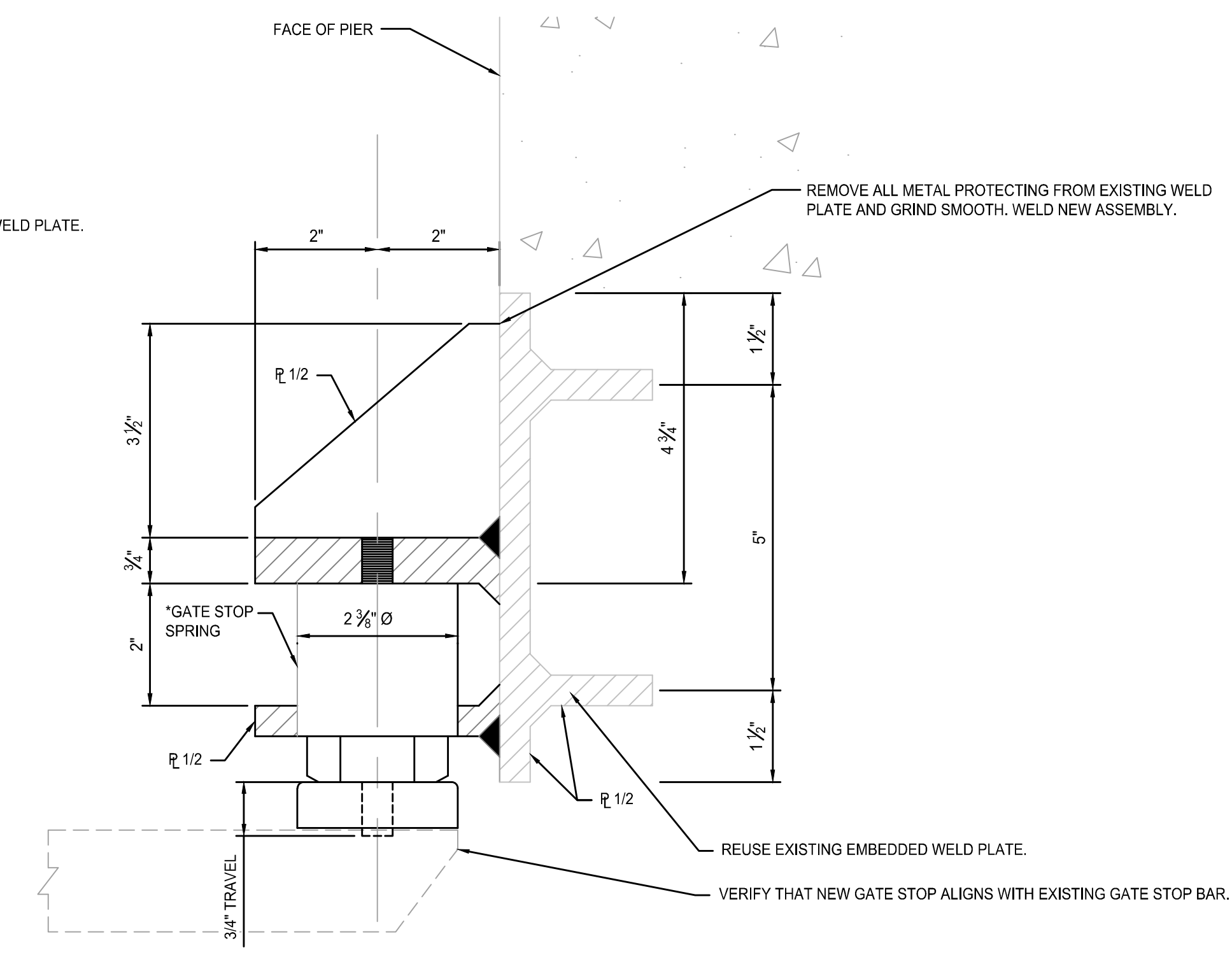
**3 BOTTOM SEAL**  
 S-502 6"=1'-0"



**4 GATE STOP LOCATION**  
 S-502 LEFT SIDE SHOWN, RIGHT SIDE IS MIRROR. N.T.S.



**5 GATE STOP ELEVATION**  
 S-502 N.T.S.



**6 GATE STOP SECTION**  
 S-502 N.T.S.

\* SPRING DEVICE TO BE EQUIVALENT TO MODEL 85K18, CATALOG NO. 55780-000, BY STRIPPIT DIVISION & HOUDAILLE INDUSTRIES INC.

8	BID SET	FJM	FJM	2019.01.29
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SECTIONS AND DETAILS II

Project No. 2075148300	Scale AS NOTED
Revision Sheet 0 of 9	Drawing No. <b>S-502</b>



8	BID SET	FJM	FJM	2019.01.29
9	REVIEW	FJM	FJM	2019.01.11
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Client/Project Logo

Client/Project  
CITY OF ANN ARBOR

GEDDES DAM  
GATE RECOATING AND REPAIRS  
ANN ARBOR, MI

Title

SECTIONS AND DETAILS III

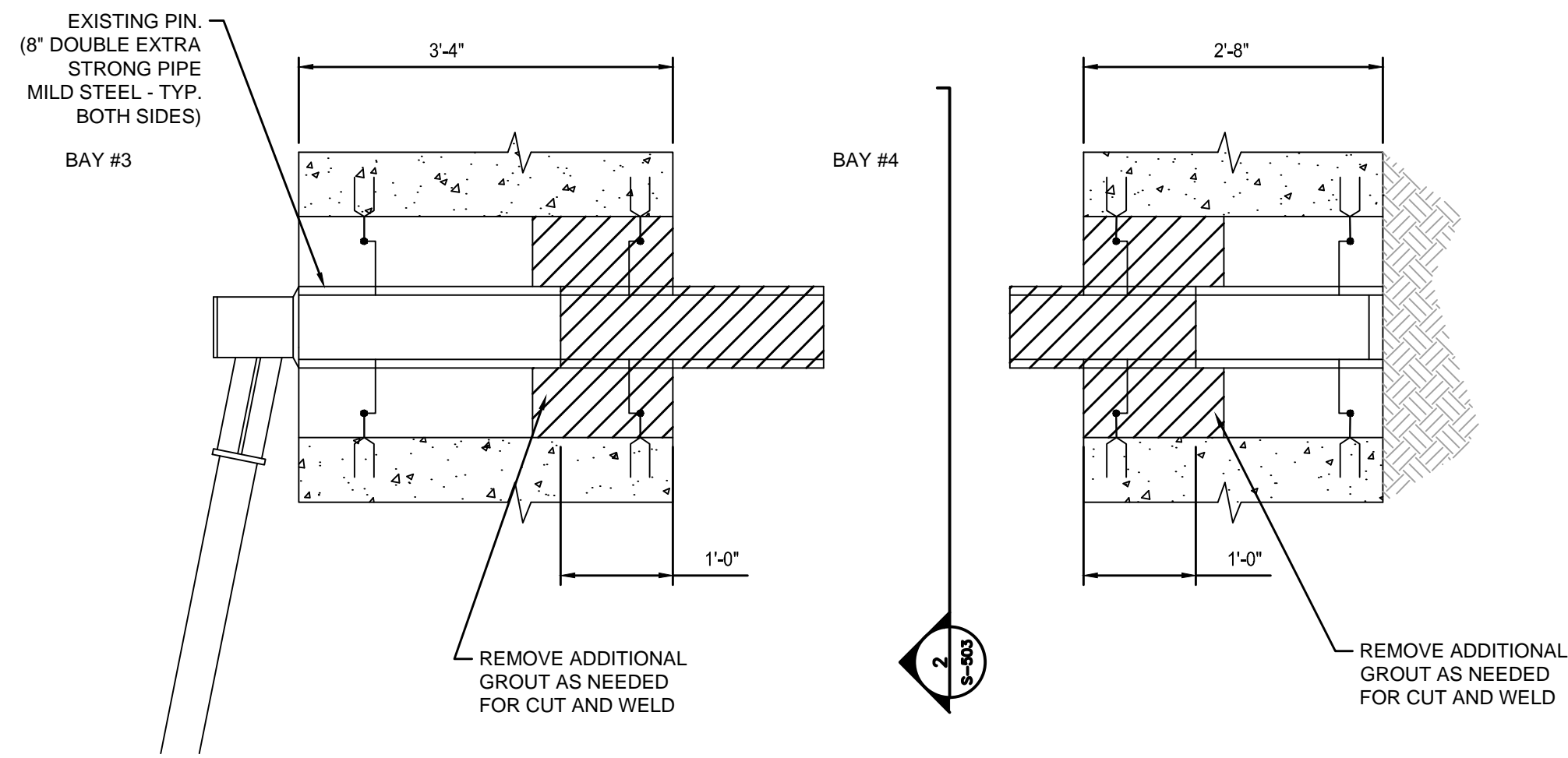
Project No.  
2075148300

Revision Sheet  
0

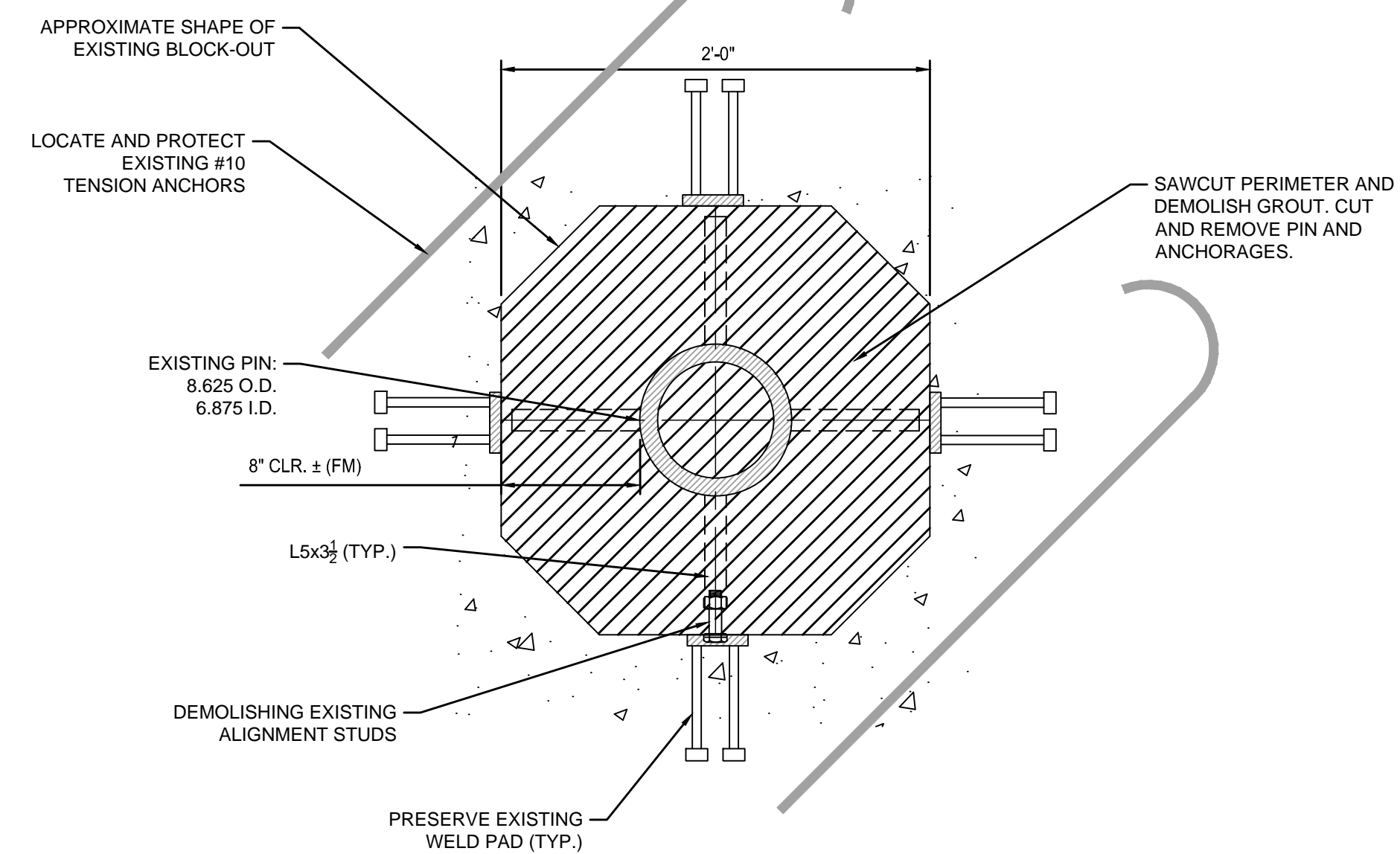
Scale  
AS NOTED

Drawing No.

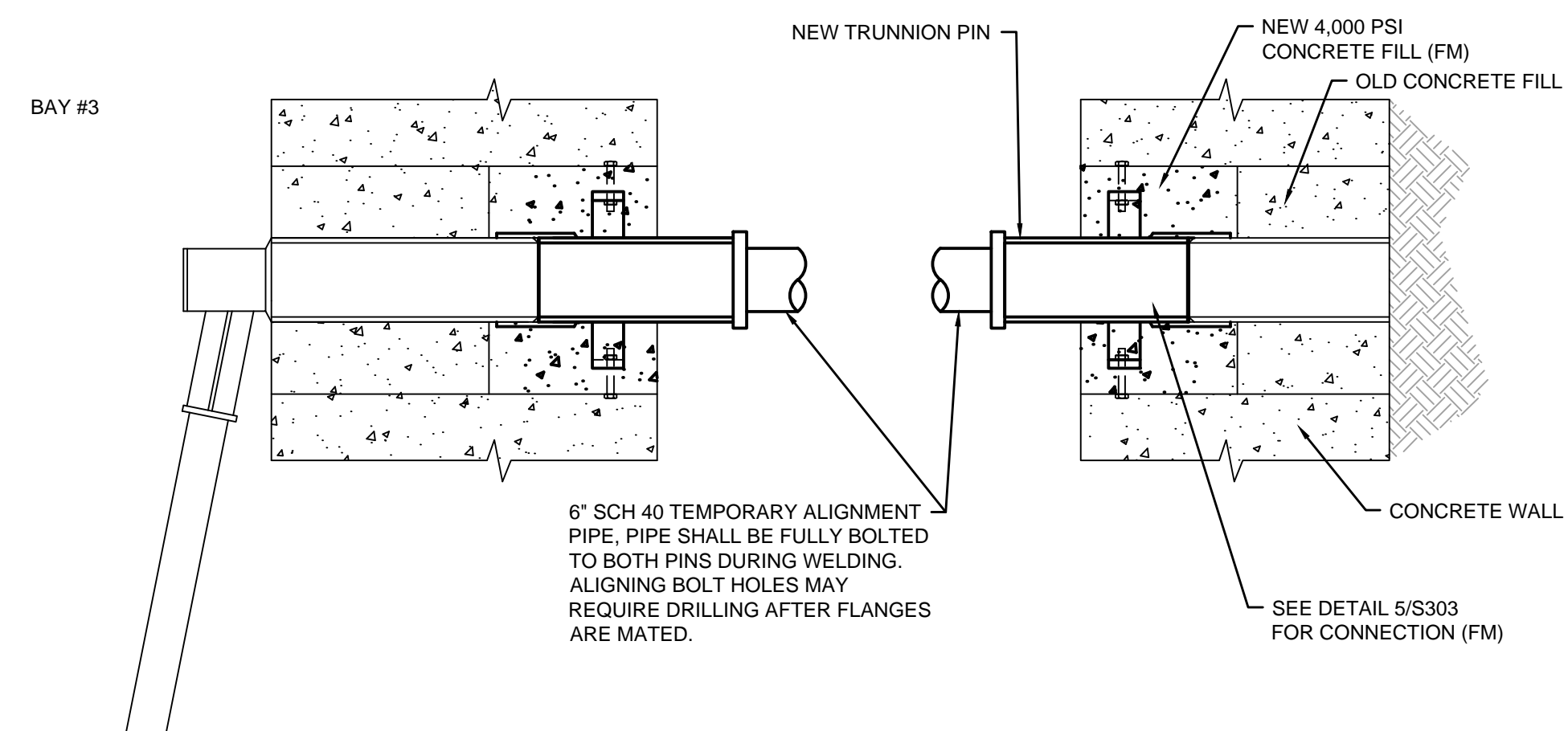
**S-503**



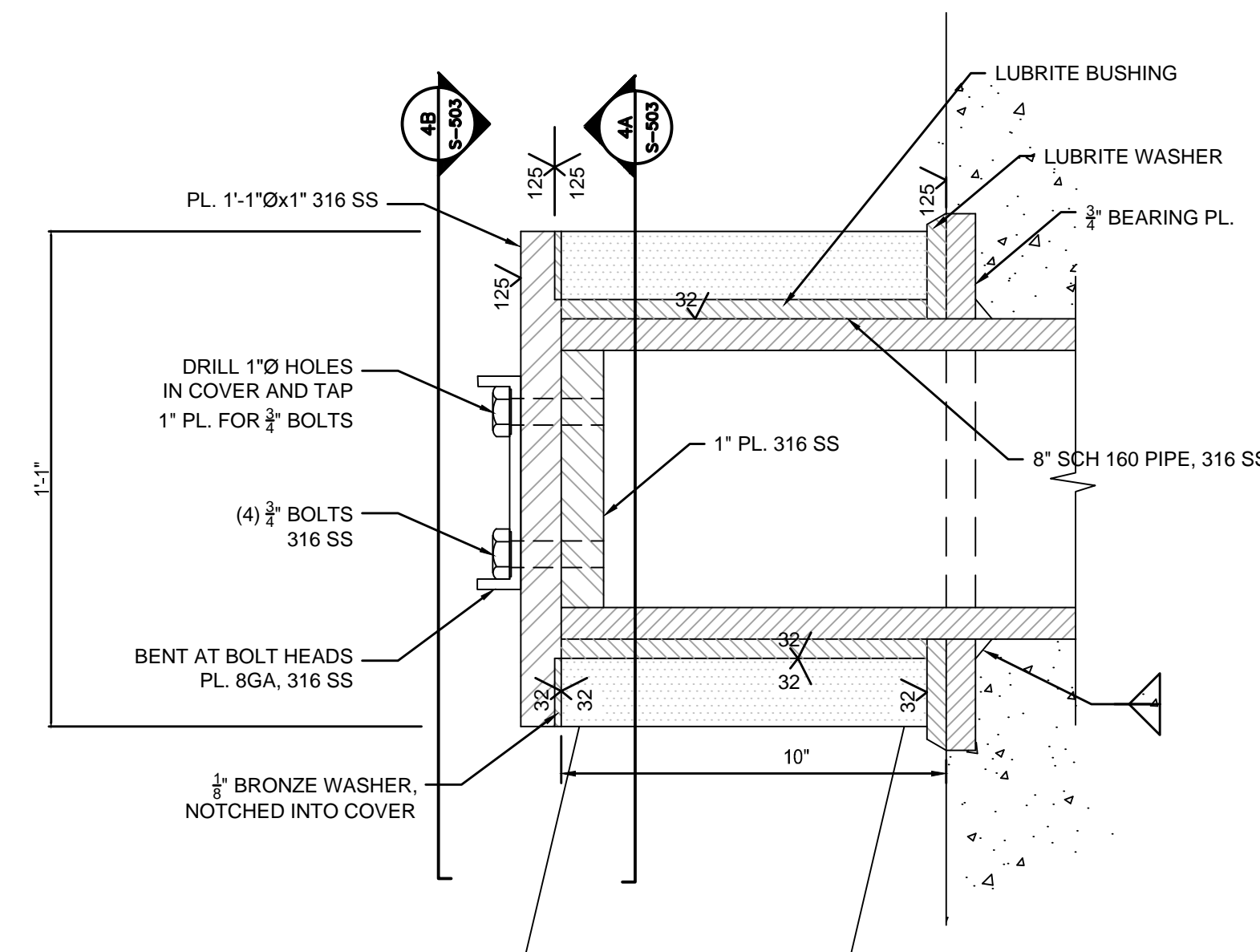
**1** TRUNNION PIN DEMOLITION  
S-503 3/4"=1'-0"



**2** TRUNNION PIN DEMOLITION  
S-503 1 1/2"=1'-0"



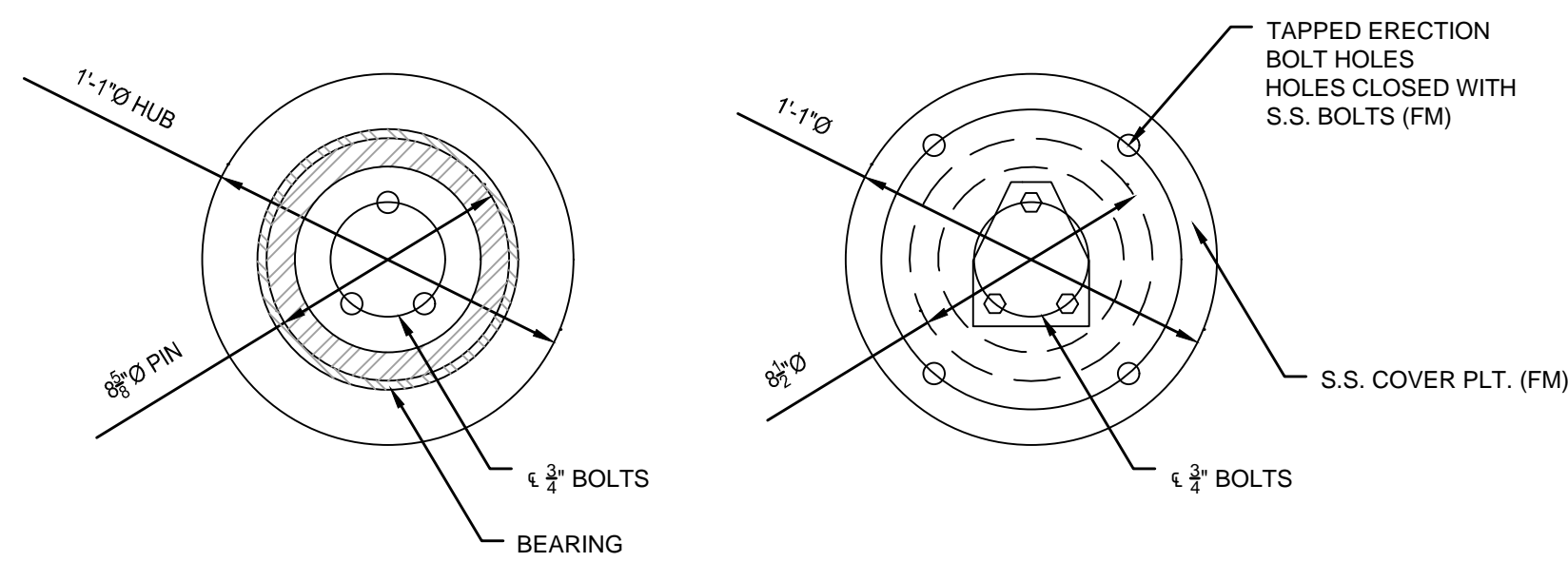
**3** TRUNNION PIN INSTALLATION  
S-503 3/4"=1'-0"



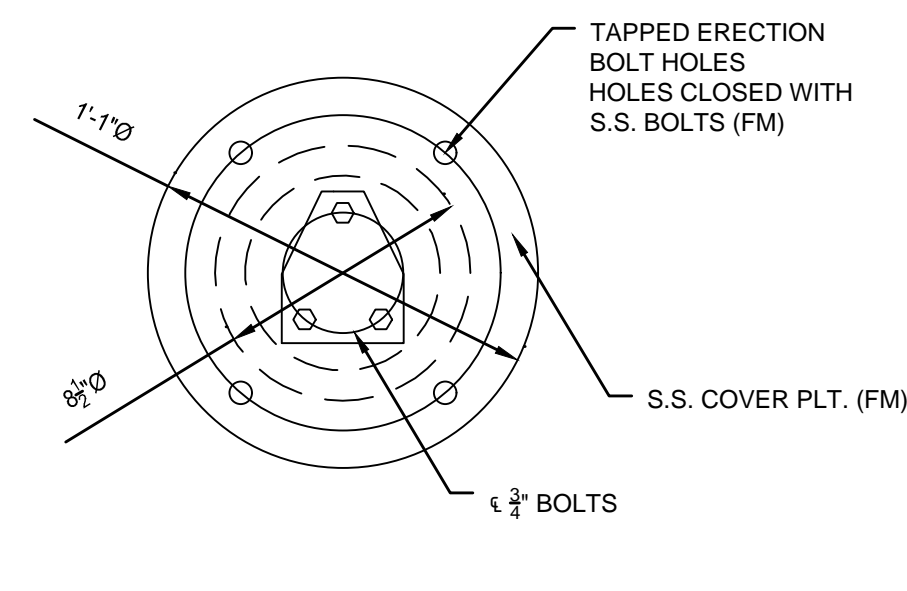
**4** TRUNNION PIN  
S-503 3"=1'-0"

NOTES:

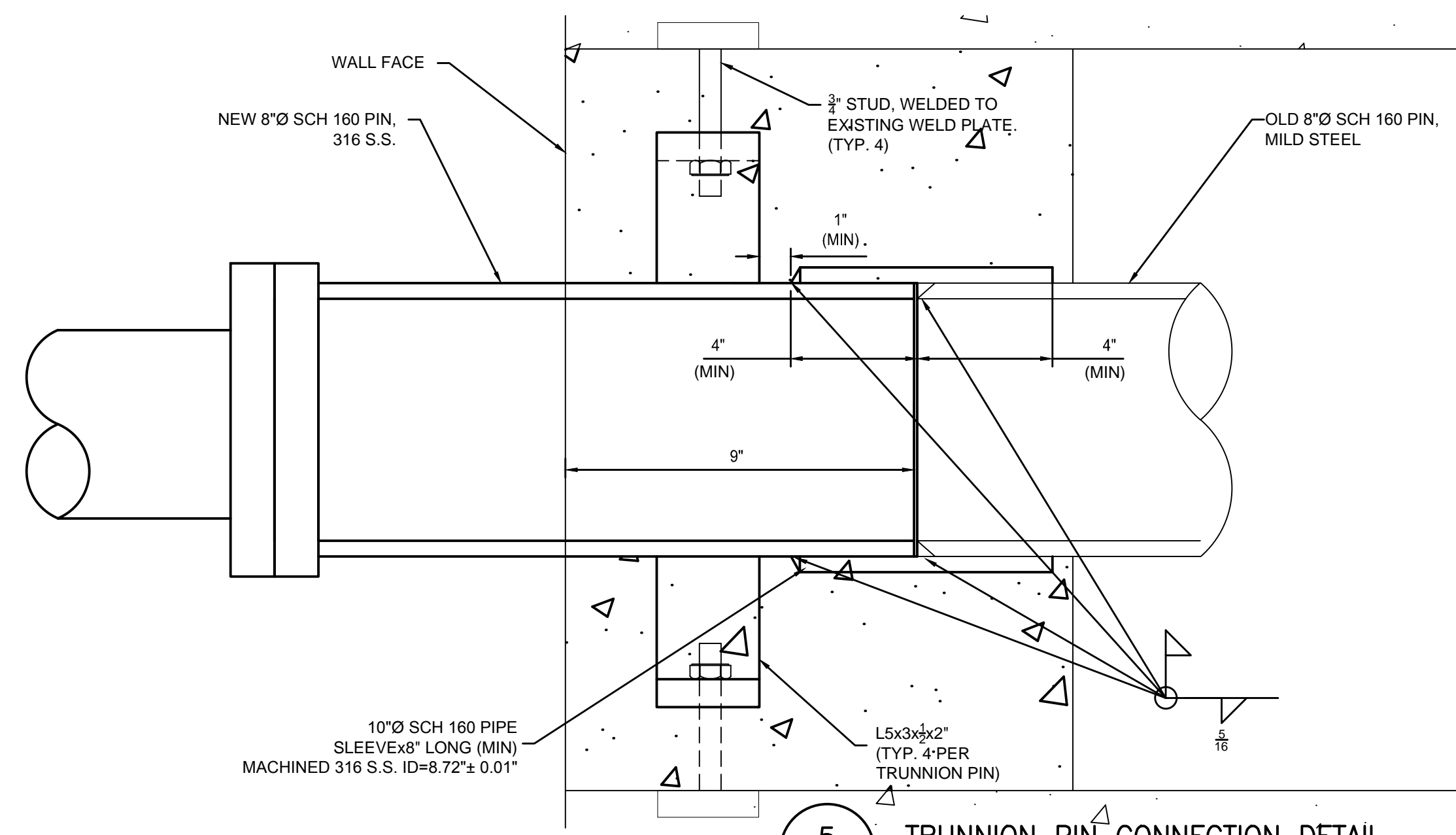
- CONTRACTOR SHALL COORDINATE MACHINING OF TRUNNION PIN AND HUB WITH BUSHING
- MACHINING OF HUB SHALL BE AFTER WELDING FABRICATION IS COMPLETE ON HUB ASSEMBLY.



**4A** DETAIL  
S-503 3"=1'-0"



**4B** DETAIL  
S-503 3"=1'-0"



**5** TRUNNION PIN CONNECTION DETAIL  
S-503 3"=1'-0"